

Applicant's counsel's qualifications as an expert. Thus, Applicant believed that only the Prior Declaration were required to give a declaration basis for the statements by Applicant's counsel.

The New Declarations detail how one skilled in the art would in fact use the disclosure of the above-referenced application to construct apparatus in accordance with the claimed invention without undue experimentation. Thus these New Declarations are designed to give detailed examples to overcome the Office's concern that the disclosure of the above-referenced application did not adequately describe the claimed invention so that the artisan could practice it without undue experimentation despite the factual conclusions of experts in the field in the Prior Declarations. These New Declarations (1) show how an artisan in practice would construct without undue experimentation the claimed invention using the disclosure of the above-referenced application which describes the control strategy and (2) apply the disclosure to a real time computer system that existed at the time of the invention. Thus, the New Declarations contain illustrations of how to configure a particular device that existed prior to the date of invention in accordance with the disclosure of the above-referenced application by direct illustration of how one would "program" such a device.

Turning to the New Declarations and what they disclose, the important thing to remember is that while microcomputers were "nascent in 1986 within the spa industry" and that until Applicant's invention all previous control systems in the spa industry were "electro-mechanical and used relays for high power pump motor and heater switching", microcomputers were not nascent in control of processes. The application of microcomputers had been generally used in the art for control of processes and other fields in the 1970s as well as the earlier 1980s. See paragraph 3 of the New Declaration of Michael E. Tompkins and paragraph 2 of the New Declaration of Edwin T. Love. PLC systems contained microcomputers in the late 1970s and were used to replace electro-mechanical relay components for solid state logic and control in other industries (but not the spa industry). Thus, PLCs were available, and those who used them did not have to know the methodology of their construction or other microcomputer control system construction in order to construct the

control system set out in the above-referenced application using a PLC. Although PLC devices were well known, a great many pages of description would have been needed in the application to exhaustively describe the full computer construction and operation. Such a description would not have contributed anything that was needed by those skilled in the art in order to construct a control device using the microcomputer of the PLC in accordance with the specification of the above-referenced Application to control the spa system, but in fact would have been so voluminous as to mask the actual invention. All that was really needed in order to construct the control system described in the above-referenced application was a listing of the hardware and the algorithms necessary for control that show how the hardware pieces are to be related to each other. See paragraphs 4 and 11 of the New Declaration of Mr. Love. The uniqueness of the invention of the above-referenced application lies in recognizing the control problem and formulating the solution to it.

To illustrate how to configure the PLC for the control solution of the application, in the New Declarations, the Applicant used a PLC common in the art on May 27, 1987, discussed in the New Declaration of Mr. Tompkins, starting in paragraph 8 and running through paragraph 10. See also paragraphs 4 through 10 of the new Declaration of Mr. Love. It should be noted that the New Declaration of Mr. Love was prepared by an independent third party, Mr. Love, who was initially given a copy of the above-referenced patent application but not of the New Declaration of Mr. Tompkins, and Mr. Love independently constructed examples of the control strategy to illustrate how someone skilled in the art would carry out the configuration process given the disclosure of the above-referenced application. After the New Declaration of Mr. Love was prepared, it was edited for form but was still the independent formulation by the third party who was skilled in the art was practicing in the field in control problems using the PLC illustrated prior to the date of the filing of the parent application of the above-referenced Application.

Thus, Applicant believes that it has overcome the chief complaint of the Office, namely "Appellant has made no reference to known programs to perform all the above tasks".

Further, the Office raised the issue "Appellant has not provided a flowchart nor has Appellant detailed the operations that would be taken by the programmer". The New Declarations also present detailed flowcharts that could be easily constructed from the description of the invention contained in the specification of the above-referenced application to show the interchangeability between flowcharts and the description contained in the above-referenced Application specification. In this regard, paragraph 16 of the New Declaration of Mr. Tompkins and paragraph 8 of the New Declaration of Mr. Love detail how one would flowchart from the written description should the problem be a lack of flowcharts. Applicant believes that the flowcharts are not the important item but only that the information be present for either converting to a flowchart or for reference as a written description, depending on the preference of the programmer. The fact that the information is in written form and not in a flowchart would not interfere to the extent of 35 U.S.C. 112 with the programmer being able to only use flowcharts.

Further, it is not unreasonable for the Applicant to reference prior art existing devices that can properly perform their functions. As can be seen from the user's manual and other manuals attached to the New Declarations, it is not unreasonable to expect those skilled in the art, even if one defines those skilled in the art as "people with electro-mechanical control prior knowledge" (which is not in Applicant's estimation a correct standard for those skilled in the art) to use PLC devices. They can read and understand the PLC user's manual and apply their knowledge of electro-mechanical systems directly to configuring or "programming" a PLC to produce the control system described in the above-referenced Application.

The Applicant agrees fully with the remarks of the Office concerning the Prior Declaration of Mr. Tompkins that "programming language" should not be the basis of any rejection but is a valid exercise of discretion by those in the art and really has different meanings depending on what device is used. Programming language for some microcomputer systems would have been an assembly language at the time of the invention or in higher level, more functional source code languages, or ladder logic could be used as illustrated in the New Declarations (see paragraph 5 of the New Declaration of Mr. Tompkins and

paragraph 6 of the New Declaration of Mr. Love) that was required by the PLC control device. Further, other functional language specifications could be used, using a formatted method of inputting data for the specific control system of the same sort as the PLC device for control devices that were readily available for purchase by those skilled in the art prior to the date of applicant's original application. It should be noted that because the Office has presumed that persons who might know about electro-mechanical devices and controls might not know how to design from a microcomputer control system starting with the purchase of a microcomputer chip, the New Declarations were chosen specifically to address how someone only having electro-mechanical device experience could use a PLC with its microcomputer to directly relate an electro-mechanical device to a solid state microprocessor-based control device. See paragraph 6 of the New Declaration of Mr. Tompkins and paragraph 10 of the New Declaration of Mr. Love.

Based on the Office's assertions, the Office felt that the Prior Declarations were insufficient because the disclosure was deficient because "it fails to teach how those in the art can program the microcomputer". While applicant has now illustrated that this assertion was factually wrong by showing in the New Declarations how one skilled in the art would use a PLC to practice the invention, applicant also submits the Office's assertions are not properly taken. The Office further clarifies its assertions by stating "the rejection is not concerned with the computer programs that could be used, and with the devices that are available", presumably assuming that no integrated systems for data base input were available to those in the art at that time (which assumption was incorrect as discussed above). No statutory reference or case is cited for this proposition by the Office other than 35 U.S.C. 112. Indeed, Applicant submits that no case could be cited by the Office to support this proposition. The Office has taken the position that the Examiner, a person not more knowledgeable than those skilled in the art, could determine what would be necessary in the specification to aptly program a microcomputer based control system to conform to the specification of the above-referenced application by those skilled in the art despite statements by those skilled in the art. What the Office is doing is traversing the Declarations. The Office seems to take the position that although those skilled in the art

state that they could build the device from the specification, the Office still doesn't accept the conclusion by those skilled in the art that the specification teaches those skilled in the art sufficiently to construct a device without undue experimentation. The New Declarations also disclose the design basis document used to actually construct the invention by others around the time of the invention which was much less detailed than the disclosure made of the invention filed with the Patent and Trademark Office in the parent of the above-referenced application. Nevertheless, the design basis document was sufficient to successfully produce a prototype.

This traversing of conclusions by those skilled in the art is seen by the Office as justifiable by the Office's assertion that the declarants are not those skilled in the art, i.e. those who dealt in electro-mechanical relay systems for control. While applicant submits that the Office is incorrect in making its assertions, rather than build an appeal on that basis it seems more logical to illustrate to the Office how someone skilled in the art in electro-mechanical devices could read the specification and prepare the appropriate logic in a microcomputer system that existed on the date of the application to practice the invention. This is one of the objects of the New Declarations as discussed above.

As further argument for why the above-referenced application was in allowable form under 35 U.S.C. 112, applicant would point out as set out in paragraph 11 of the New Declaration of Mr. Tompkins that the manufacturer of the Gould equipment at the time of the filing of the parent of the above-referenced application does go into lengthy explanation of the internal operations of the "program" of the microcomputer in its manual to teach those skilled in the art how such a system is constructed, but this manual notes that the information is not required for the designer to program the controller. This is substantially the same statement that was being made by applicant with regard to needing only the control strategy set out in the above-referenced application, including in the Prior Declarations. As discussed above, preparing documentation on these internal programs would not only be wasteful but would be wasted to teach someone how to program the microcomputer to scan data or convert the data to engineering units or other usable units for applying control algorithms, since that is automatically handled by equipment which was

available at that period of time. It would be just as useless to copy a user's manual in the specification, which manual was also available to the public during that period of time for the Gould equipment and the Texas Instrument equipment, in order to teach those skilled in the art what the user's manual already teaches which is how those in the art can program at a user level a PLC with control strategies for operation by the microcomputer. In essence these PLCs have as a "program" a database builder and the programs that are already in the microcomputer to operate on the database. Thus, being required to explain in detail the programs of the microcomputer or even the programming language to use with the PLC would be tantamount to saying that when one specifies in a specification the AC to DC converter, one needs to go into the details of how one manufactures an AC to DC converter, even if it is old in the art and readily purchasable. See New Declaration of Mr. Tompkins, paragraphs 13, 14 and 17. Further, so the Office did not believe that there was only one PLC which might not be generally available, as set out in paragraph 15 of the New Declaration of Mike Tompkins, this type of system was available from multiple vendors. See also paragraph 12 of the New Declaration of Mr. Love.

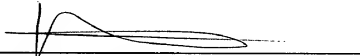
Applicant does not know what information was used by the Office to determine that "the latitude of the gaps are simply too great to enable one of ordinary skill in the art to make and use the invention given rudimentary knowledge of computers available in the past in spa control". The mistake made by the Office is in presuming that the art of record revealed the state of the prior art even though applicant repeatedly stated that control systems were available having all the elements necessary to operate a control system of the sort described in the above-referenced application and that people who understood control could configure such systems to implement the control system set out in the above-referenced application. While the claimed invention does represent an introduction of unique control systems to spa control requiring an introduction to the computer age, this does not mean that the tools were not available to those skilled in the art. It only means that the individual elements had never been combined nor thought to be combined by those skilled in the art to produce a synergistic microprocessor based control system for as pa that

makes the invention patentable but does not create an impenetrable barrier for those skilled in the art of control, or even spa control, to manipulate computers.

Thus, the New Declarations should be admitted because they either help bring the case to issue or they help place the case in better form for appeal.

Reconsideration of the Application and entry of the New Declaration of Michael E. Tompkins and the New Declaration of Edwin T. Love and allowance of the above-referenced application are respectfully requested.

Respectfully submitted,



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